

Chlorides

ISSUE

During preparation of the 1998 Feasibility Report for the Savannah Harbor Expansion Project, Savannah city officials questioned whether chloride levels may increase at the City of Savannah's Industrial Water Intake on Abercorn Creek. Deepening of the navigation channel could be expected to result in upstream movement of tidal waters. If this movement were to reach far enough upstream, it could cause waters that contain slight amounts of salt to extend to the City's water intake in Abercorn Creek. Some of the customers that receive that water from the City have an upper limit on the amount of chlorides that they can accept. While models in use at the time did not show such impacts, because of the uncertainty of whether such an impact might occur and out of an abundance of caution, construction costs were included in the Project to mitigate for the possible occurrence of adverse impact at this water intake.

By policy, the Corps is to evaluate mitigating all adverse project impacts. However, is not legally required to compensate for impacts to chlorides. In this case, the project could cause an economic impact on a municipal government by making it unable to meet established criteria for the quality of water it can produce from that source. Therefore, mitigation for substantial adverse impacts to chloride levels at the City's water intake is appropriate.

PROJECT ACTIONS

The Project Delivery Team is using the EFDC hydrodynamic model to identify physical changes in the estuary that could be expected with various project alternatives. The model development is nearly complete and the model runs that will be used to predict changes in salinity will soon be performed.

Savannah District contracted with Tetra Tech to develop a relationship that could be used to predict chloride levels in the estuary. Tetra Tech completed their report in December 2005. They found that chloride levels at the intake periodically exceed the City's acceptability criteria of 12 ppm. That occurrence happens more frequently during the low river flows that occur in the summer.

Tetra Tech's report is now being reviewed by the City of Savannah. An Independent Technical Review is being conducted by the Columbia office of the USGS.

The PDT intends to mitigate for project-induced impacts to chlorides at the City of Savannah's Industrial Water Intake.

Version Dated
3 January 2006